

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An optical data transmission system, comprising:
a passive kerb location having an optical router and a plurality of optically pumped sources; and
~~an optical router; and~~
a plurality of optical network units each corresponding to one of the plurality of optically pumped sources, wherein each optical network unit has a laser for producing data modulated pumping light for transmission to its respective optically pumped source,
~~wherein the optical network units are configured to transmit a plurality of respective data signals to the kerb location, wherein the kerb location includes a plurality of each optically pumped source of the plurality of optically pumped sources is configured to receive injection light from an injection source outside the passive kerb location and to receive the data modulated pumping light from its respective optical network unit and configured to form data modulated transmission light at a predefined wavelength range assigned to its respective optical network unit wherein the data modulated transmission light is based on the injection light and the data modulated pumping light, wherein each predefined wavelength range corresponds to a distinct wavelength channel,~~
wherein the optical router is configured to route wavelength channels ~~having predefined wavelength ranges assigned to respective optical network units for transmission to the hub, and~~
wherein the data modulated pumping light is passively signals are converted into the distinct wavelength channels, the conversion being performed without any intermediate conversion to or from an electrical signal, and
~~wherein the data signals comprise optical signals.~~

2-3. (Cancelled)

4. (Currently Amended) An optical data transmission system according to claim 1, wherein the data modulated pumping light is ~~signals are~~ within a wavelength range which does not include the wavelength or wavelengths of the wavelength channels.

5-7. (Cancelled)

8. (Previously Presented) An optical data transmission system according to claim 1, wherein respective ones of the optical network units are sufficiently similar that they are interchangeable.

9. (Currently Amended) An optical data transmission system according to claim [[5]] 1, wherein the optically pumped sources are injection locked lasers configured to receive injection light, wherein the injection source of the injection light is upstream from the passive kerb location.

10. (Previously Presented) An optical data transmission system according to claim 9, wherein an injection wavelength is selected by a wavelength division multiplexer and/or an arrayed waveguide grating.

11. (Currently Amended) An optical data transmission system according to claim [[5]] 1, wherein the optically pumped sources are external cavity lasers.

12. (Previously Presented) An optical data transmission system according to claim 10, wherein the optical router is within a laser cavity of at least one optically pumped source.

13. (Currently Amended) An optical data transmission system according to claim 1, wherein [[a]] the data modulated pumping light is at a wavelength different from the wavelength of light which is used to carry data traffic in upstream from the kerb location and downstream directions from the hub.

14. (Previously Presented) An optical data transmission system according to claim 1, wherein the optical router is a wavelength division multiplexer.

15. (Previously Presented) An optical data transmission system according to claim 1, wherein the optical router is an arrayed wavelength grating.

16. (Currently Amended) A method of optically transmitting data, the method comprising:

~~receiving transmitting, with an optical network unit, a plurality of respective data modulated pumping light from a plurality of optical network units and injection light from an injection source at a passive signals to the~~ kerb location in an optical data transmission system, wherein the kerb location comprises a plurality of optically pumped sources each assigned to a respective optical network unit, wherein each optically pumped source includes a ~~including a plurality of laser cavity eavities~~ configured to select a distinct resonance peak of an incident light, the optically pumped sources configured to form data modulated transmission light based on the injection light and the data modulated pumping light;

passively converting the data modulated pumping light from each optical network unit signals into data modulated transmission light based on the injection light and the data modulated pumping light, wherein each optical network unit is assigned a distinct predefined wavelength range for its data modulated transmission light corresponding to a distinct wavelength channel ~~channels with a converter~~, wherein the converting is performed without an intermediate conversion to or from an electrical signal, ~~and wherein the data signals are optical signals;~~ and

routing the wavelength channels each having distinct predefined wavelength ranges assigned to respective optical network units for transmission to a hub with ~~[[an]]~~ a passive optical router.

17-18. (Cancelled)

19. (Currently Amended) An optical data transmission system, comprising:

receiving transmitting means for receiving data modulated transmission light, at a passive ~~transmitting, with an optical network unit, a plurality of respective optical signals to a~~

kerb location from a plurality of optical network units, wherein the kerb location comprises a plurality of optically pumped sources each assigned to a respective optical network unit, wherein each optically pumped source includes a ~~including a plurality of~~ laser cavity ~~eavities~~ configured to select a distinct resonance peak of an incident light, the optically pumped sources configured to form data modulated transmission light based on the injection light and the data modulated pumping light;

converting means for passively converting the data modulated transmission light from each optical network unit ~~optical signals~~ into data modulated transmission light based on the injection light and the data modulated pumping light, wherein each optical network unit is assigned a predefined wavelength range for its data modulation transmission light corresponding to a distinct wavelength channel ~~channels with a converter~~, wherein the converting is performed without any intermediate conversion to or from an electrical signal; and

routing means for routing the wavelength channels having predefined wavelength ranges assigned to respective optical network units for transmission to a hub with an optical router.

20. (Previously Presented) The optical data transmission system according to claim 1, the optically pumped sources each comprising a laser cavity, mirrors defining the cavity, and wavelength selective elements inside the cavity.

21. (Currently Amended) The method of transmitting data according to claim 16, further comprising optically pumping, at the kerb location, the plurality of optically pumped sources with the plurality of respective data modulated pumping light signals.

22. (Cancelled)

23. (Currently Amended) The method of transmitting data according to claim 16, wherein the data modulated pumping light signals ~~are~~ is within a wavelength range which does not include the wavelength or wavelengths of the wavelength channels.

24-29. (Cancelled)

30. (Previously Presented) The optical data transmission system according to claim 19, further comprising pumping means for optically pumping the plurality of optically pumped sources at the kerb location.

31. (Cancelled)

32. (Previously Presented) The optical data transmission system according to claim 19, wherein the optical signals are within a wavelength range which does not include the wavelength or wavelengths of the wavelength channels.

33. (New) An optical data transmission system according to claim 9, wherein the injection light is amplified spontaneous emission noise produced by an upstream preamplifier.

34. (New) An optical data transmission system according to claim 11, wherein the external cavity laser is formed from narrow band reflectors.

35. (New) A method of optically routing optical data at a passive kerb location from a first optical network unit and a second optical network unit to a hub, the method comprising:

receiving a first data modulated pumping light from the first optical network unit and a second data modulated pumping light from the second optical network unit, the first and second data modulated pumping lights having wavelengths within a first wavelength range, wherein the first optical network unit is assigned to a first optically pumped source and the second optical network unit is assigned to a second optically pumped source at the kerb location;

routing the received first data modulated pumping light via a first upstream/downstream wavelength division multiplexer to the first optically pumped source and the received second data modulated pumping light via a second upstream/downstream wavelength division multiplexer to the second optically pumped source;

converting the received first data modulated pumping light at the first optical source to a first data modulated transmission light having a first wavelength;

converting the received second data modulated pumping light at the second optical source to a second data modulated transmission light having a second wavelength;

routing the first data modulated transmission light from the first data modulated pumping source to a multiplexing element via the first upstream/downstream wavelength division multiplexer;

routing the second data modulated transmission light from the second data modulated pumping source to the multiplexing element via the second upstream/downstream wavelength division multiplexer, wherein the first and the second wavelengths are predetermined and distinct from one another;

multiplexing the first and second data modulated transmission lights; and

transmitting the multiplexed first and second data modulate transmission lights to the hub.

36. (New) The method of optically routing data at a passive kerb location according to claim 35, wherein the multiplexing element is a wavelength division multiplexer and/or an arrayed waveguide grating.

37. (New) The method of optically routing data at a passive kerb location according to claim 35, the method further comprising:

receiving an injection light at the upstream side of the passive kerb location;

splitting the injection light into injection light having the first wavelength and the second wavelength;

routing the injection light having the first wavelength to the first optically pumped source via the first upstream/downstream wavelength division multiplexer and the injection light having the second wavelength to a second optically pumped source via the second upstream/downstream wavelength division multiplexer;

38. (New) The method of optically routing data at a passive kerb location according to claim 37, wherein the first and second optically pumped sources are injection locked lasers configured to receive injection light.

39. (New) The method of optically routing data at a passive kerb location according to claim 37, wherein the injection light is broadband light.

40. (New) The method of optically routing data at a passive kerb location according to claim 37, wherein the injection light is amplified spontaneous emission noise produced by an upstream preamplifier.

41. (New) The method of optically routing data at a passive kerb location according to claim 35, wherein the first and second optically pumped sources are external cavity lasers, the external cavity lasers being formed from narrow band reflectors.

42. (New) The method of optically routing data at a passive kerb location according to claim 35, wherein the first and second optically pumped sources, the first and second upstream/downstream wavelength multiplexers and the multiplexing element are contained within a laser cavity.